

Rinnai
EXPERIENCE OUR INNOVATION

NEO

RIB2310N
RIB2310L

Operation Manual



- For flued applications, this appliance must be installed with a Rinnai supplied flue system.
- Appliance must be installed, commissioned and serviced by a licensed tradesperson in accordance with these instructions and all applicable local rules and regulations.
- Please retain this manual for future reference.

LIMITED WARRANTY

Rinnai brings you peace of mind
with a 2 year minimum warranty.

TERMS AND CONDITIONS

1. During the 24 month period from date of purchase and subject to clauses 2 and 3 below, Rinnai New Zealand Limited ("Rinnai") will, at its own discretion, either replace or repair any defective product at no charge to the customer.
2. This warranty covers manufacturing defects only. This warranty will not apply if (for example) the product has been improperly installed or is otherwise installed contrary to manufacturer's recommendations, has been damaged during or after installation, has not been operated in accordance with operating instructions, or has been subjected to damage or abuse beyond that expected from conditions of normal use.

3. Warranty claims may be invalid if not accompanied by details of the installing or supervising gas fitter's registration number and the gas fitting certification number.
4. This warranty commences from the date of purchase. Proof of purchase is required at the time of any warranty claim.
5. Servicing of the product is to be carried out by a Rinnai authorised service centre.

All Rinnai appliances meet or exceed the safety standards required by New Zealand gas and electrical regulations. The company is constantly improving its products and as such specifications are subject to change or variation without notice.

Please keep these instructions in a safe place for future reference.

RECORD AND ATTACH YOUR PROOF OF PURCHASE BELOW:

Your Retailer: _____

Name: _____

Address: _____

Telephone: (_____) _____

Date of Purchase: ____ / ____ / ____

Rinnai

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This manual has been written to:

- Highlight the safe operation and positioning of this appliance
- Provide advice on maintenance, servicing and troubleshooting to ensure optimum performance

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.



For assistance or additional information contact Rinnai on 0800 RINNAI (0800 746 624).

About your Rinnai Neo gas fireplace

Congratulations on the purchase of your Rinnai Neo gas fireplace. The Neo range combines modern good looks with the latest advances in technology. Impressively it's the first natural draft fireplace available in New Zealand with a greater than 4-star energy rating across all installations.



Mix and match from a range of frame options

A choice of contemporary framing options is available which has the added benefit of being able to interchange your frames at a later stage.

Please note: Child lock function on Electronic Timer Remote Models (ETR)

Neo ETR models have a built-in child lock function that requires pressing two buttons at the same time to operate the appliance. This function cannot be overridden. To turn the controller on, press PWR and OK at the same time. To turn the controller off, press PWR.

Specification summary

Gas type	Gas Consumption	Output	Efficiency
NG	14-30 MJ/h	3.24-6.94 kW	80.5%
ULPG	14-27 MJ/h	2.98-6.04 kW	80%

About your Rinnai Neo gas fireplace

General description

Your Neo is a burning log effect, gas fire with a natural draft combustion system, intended for use with NG and ULPG. The burning log effect is achieved using one single main burner with strategically placed imitation logs and granules. The burner, logs, and granules are contained in a glass fronted, sealed burner box.

Temperature control is achieved by pressing the up or down marked arrows on the manual control switch or via the wireless controller/thermostat and timer.

This heater has an electronic ignition with intermittent pilot. The pilot is only on when the heater is in operation.

Air for combustion is drawn from the room. By-products of combustion are exhausted via the flue discharge vent when installed in a masonry chimney, or when installed in a zero clearance box or as a freestanding unit, through a 100 mm x 150 mm twin skinned flue to the outside of the house.

This appliance is modular and consists of an ‘engine’ that is utilised in any of the three configuration types as listed below.

Fireplace: Masonry installation

The appliance is directly mounted into an existing masonry fire place or a non-combustible masonry enclosure that has a chimney.

Zero clearance (mock chimney) installation

The appliance is fitted within a zero clearance box then inserted into a wall or other suitable structure. Materials need not be non-combustible.

Freestanding installation: Plinth or console

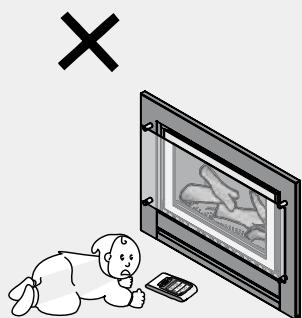
The appliance is housed in a decorative fabricated sheet metal box that is intended to be freestanding and not inbuilt.

Safety

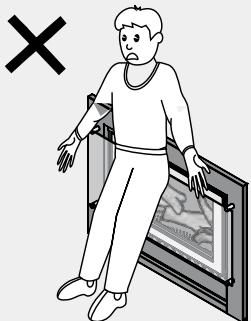


This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

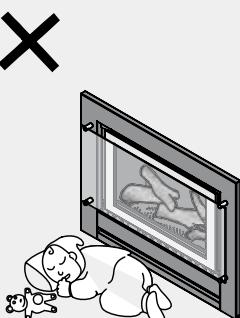
- THE HEATER MUST NOT BE USED IF THE GLASS PANELS ARE DAMAGED
- DO NOT MODIFY THIS APPLIANCE
- DO NOT CONNECT TO AN LPG GAS CYLINDER INDOORS
- DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION



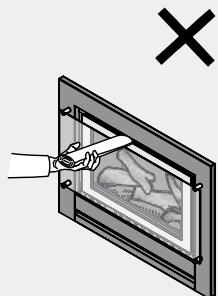
Children should be supervised at all times to ensure they do not play with the appliance. Hand or body contact with the appliance must be avoided.



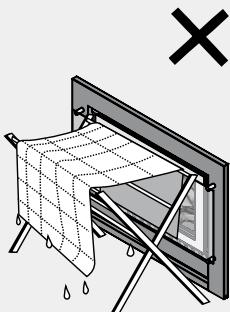
Do not allow anyone to sit, lean or sleep directly in front of the appliance.



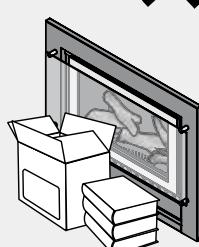
The glass dress guard must be fitted to this appliance to reduce the risk from serious burns and no part of it should be permanently removed.



Do not allow anyone to post articles through into the heater.



This appliance must not be used for any other purpose other than heating.

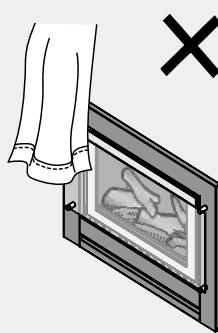


Do not restrict warm air discharge by placing articles in front of the appliance.

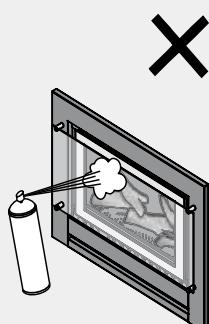
Safety



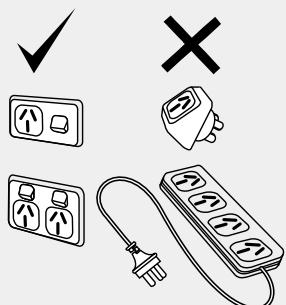
Do not use or store flammable materials near this appliance.



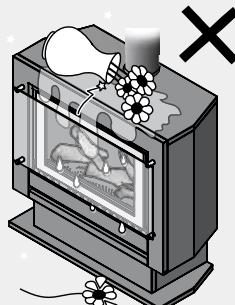
Combustible materials must not be placed where the heater could ignite them,



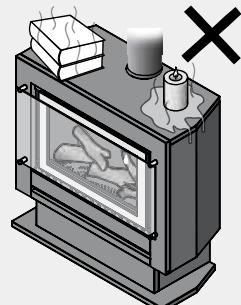
Do not spray aerosols while the appliance is operating. Most contain butane gas which can be a fire hazard if used near the appliance.



A dedicated 240 V earthed 10 A power point must be used with this appliance. Do not use power boards or double adaptors to operate this appliance.



Do not place containers of liquid on top of the appliance. Water can cause extensive damage to the appliance and create an electrocution hazard.



Do not place articles on or against this appliance.

Safety devices

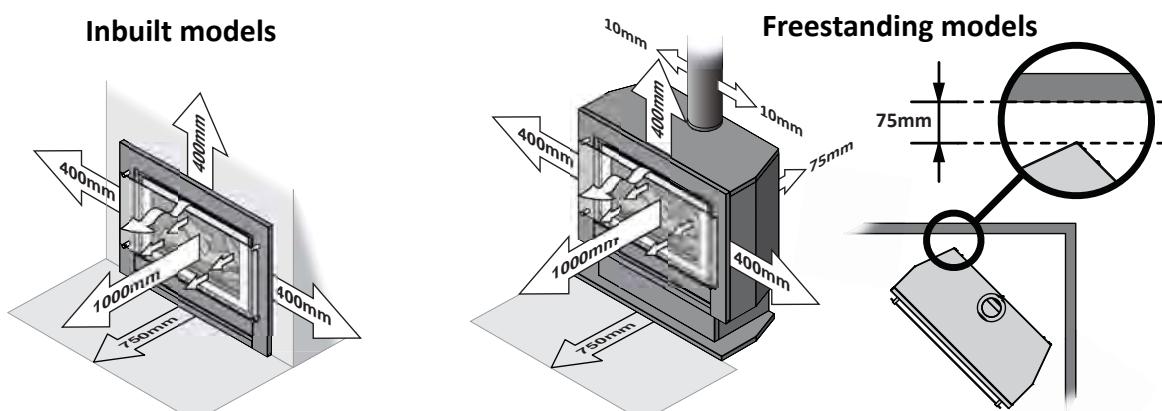
- Over heat switches:** When the heater gets too hot during operation (for example; when the air outlet louvres are blocked), the over heat safety switches will turn off the gas and will only allow the heater to restart when it has cooled down.
- Electrical fuse:** The electrical circuits are protected by a fuse.
- Flame failure sensing system:** This device automatically cuts off the gas supply to the heater in the event the heater does not ignite after several attempts—this is to prevent gas building up inside the unit.
- Power failure:** In the event of a power failure or power cut, the gas valves will automatically close and shut down the unit.

Location and clearances

The appliance is not suitable for areas where painting is taking place, or in places such as hairdressing salons, where there may be fluff and dust, and where aerosols are used.

The appliance must not be installed where curtains or other combustible materials could come into contact with the heater. In some cases curtains may need restraining.

The clearances listed below are minimum clearances unless otherwise stated.



Freestanding models can be positioned directly on the floor

Mantels, surrounds, and hearths for inbuilt installations

A mantel and surround are allowed providing they are outside the minimum clearances shown above.

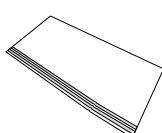
Minimum clearance and additional mantel/surround depth

The minimum clearance from the top of the appliance is 400 mm. The depth of the mantel/surround at this minimum clearance must not exceed 150 mm. For every 50 mm of added mantel depth/surround, there must be an additional 100 mm of clearance. For example; a 200 mm mantel depth will require a 500 mm clearance from the top of the appliance.

Hearths

A hearth is not necessary but can be used for decorative purposes or protection of sensitive flooring if required. It must not obscure the front of the fire.

Floor protection



Heat emanating from this heater may over time affect the appearance of some materials used for flooring, such as, carpet, vinyl, cork or timber. This may be amplified if the air contains cooking vapours or cigarette smoke. To avoid this occurring, it is recommended that a mat be placed in front of this appliance.

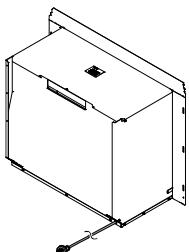
General information

Before operation



Read these instructions to get an overview of how to operate, maintain and service your Rinnai appliance.

Electrical connection



The Neo is supplied with a power cord (length 1500 mm) and a 3-pin plug. The standard electrical connection passes through the rear panel, but can also pass through the left and right hand side of the unit by removing the knockout tab from the bottom edge of the front panel. If changing the electrical position, use the rubber grommet from the rear of the appliance for cable protection.

Rinnai recommend the heater is plugged into a dedicated 240 V, 10 A earthed power point. The power point **must not** be located above the heater (potential fire hazard). If the supplied plug and power cord is to be used with an external power point then the power cord will need to be fitted with the supplied grommet.

A suitable means of electric isolation must be provided which is adjacent to the appliance and accessible with the appliance installed.

The electrical cord is not fire rated and should not come into contact with the unit. If the supply cord is damaged, it must be replaced by a licensed tradesperson. This must be a genuine replacement part available from Rinnai—part number 6765B.

Fan

On start-up of the appliance the fan will start approximately four minutes after the heater is switched on. This delay is to reduce the amount of cold air being pushed out into the room. On shut-down the fan will stop approximately eight minutes after the heater is switched off. This is to cool the appliance down.

Installation by a licensed tradesperson

Ensure your installer talks to you about the use and care of this appliance and that you understand these instructions.

The installer also needs to complete the appliance commissioning sheet (ensures the appliance has been installed in accordance with the installation instructions) and installer details contained within this manual and leave the manual with you.

General information

Maintenance and servicing

All external surfaces of the heater can be cleaned using a soft damp cloth and mild detergent. Do not use solvents and do not attempt to clean the heater while it is hot or operating.



Rinnai has a maintenance/service and spare parts network with personnel who are fully trained and equipped to give the best advice on your Rinnai appliance. If your appliance needs maintenance and or servicing, please call Rinnai (0800 746 624) from a **land line** and select option one for a service centre in your area.

For reliable operation Rinnai gas fireplaces, including inspection of the flue system, should be serviced every two years. If they are in a particularly dusty environment or subject to excess lint, for example dog hair or where there are newly laid carpets, then annual servicing would be beneficial.

Regular maintenance and servicing is not covered by the Rinnai warranty.

Do not attempt to carry out any work on your appliance other than that mentioned in the troubleshooting section. If you have any faults or problems, contact your installer or call Rinnai.

Soot deposits

Small soot deposits (carbon deposition) on the log set or glass is normal. Significant build up however is not normal and will require a service call. Refer to the Troubleshooting section for further information.

TV installation above a fireplace

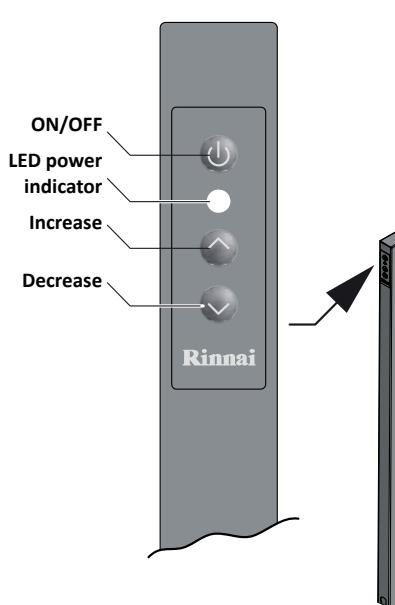
If installing a flat screen TV above the fire the main issue is heat. Heat from the fire and heat from the flueing components that sit behind the TV, especially if recessed.

The Neo gas fires have a fan that distributes warm air from the top of the appliance out into the room. As warm air is dispersed outwards as opposed to directly upwards, installation of a TV may be an option. For further information please contact Rinnai or refer to the Neo Installation manual available online at www.rinnai.co.nz.

It is up to the home owner to check the TV installation instructions with the TV supplier to verify clearances. Some TV manufacturers have warranty conditions that state a TV is not to be installed above a fireplace.

Rinnai does not accept any responsibility for damage to a TV resulting from the use of this information.

Manual models: Control panel operation



Flame Height	Fan Speed
1	high
2	low
3	low
4	low
5	high
6	high
7	high

The relationship between the flame height and fan speed is preset and cannot be independently adjusted.

Turning the heater on

Press the ON/OFF button once, you will hear the electronic ignition sparker. The electronic ignition stops when the pilot flame is established, the main burner then ignites off the pilot and will go to the highest setting (refer table above). The blue LED power indicator will stay on, indicating the heater is in operation.

Flame height may be adjusted after one minute of operation. To change the burner and fan settings press the UP and DOWN arrows to increase or decrease the flame height.

Turning the heater off

Press the ON/OFF button once. The blue LED power indicator will flash indicating that the appliance is in the OFF/STANDBY position. When in OFF/STANDBY (power supply connected and switched on), the blue LED power indicator will flash at regular intervals. This is normal operation.

ETR models: About your wireless controller



The wireless controller/thermostat comes standard with the Neo ETR models, and can be purchased as an accessory with the Neo manual models. It is designed to be wall mounted on a bracket, supplied with the controller, within 10 m of the fire.

Location

The controller houses the thermostat, this senses the room temperature and communicates information back to the Rinnai Neo via radio frequency. It needs to be positioned in the same room as the appliance and in the area that requires heating—a place not subject to temperature fluctuation. For example; if placed near a door subject to cold drafts, the controller will sense the room is much colder than it is.

The ideal position for the controller is:

- Away from possible drafts in the room
- Away from direct sunlight
- A suitable distance away from the heater (between 2-10 m)
- Ideally 1.5 m from the floor (approximately at chest height when standing)

Controller dimensions: H-140 mm, W-80 mm, D-20 mm

Batteries



Battery type: Two x AA batteries
Battery life: Approximately 12 months

When the batteries are changed all settings will be lost and the controller will revert back to the initial setup screen.

Modes of operation

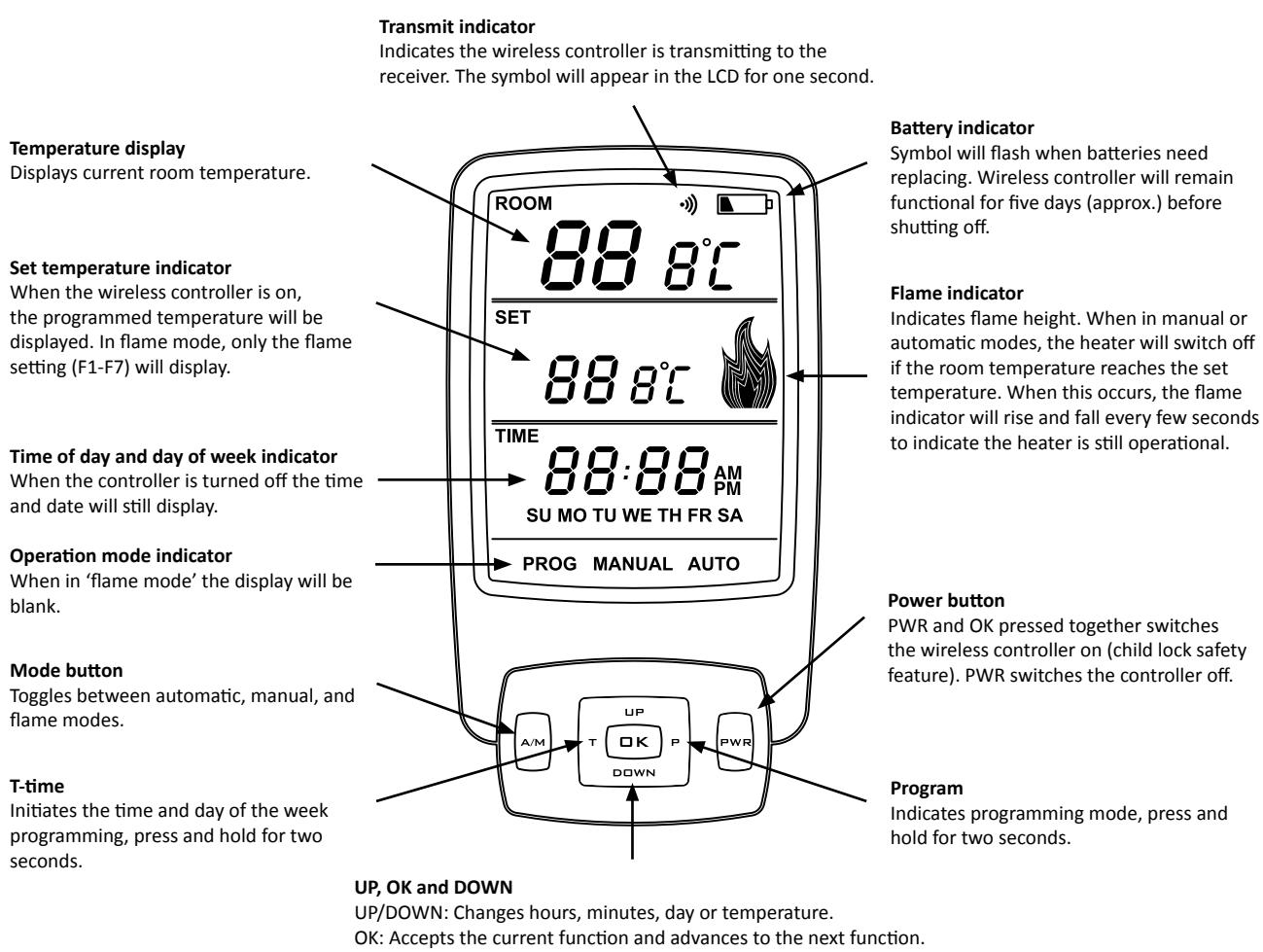
Your Rinnai Neo, when operated using the wireless controller, has three modes of operation (refer p. 17 for further information):

1. Manual mode (set temperature)
2. Automatic mode (programmed timer and temperature)
3. Flame control mode

Important

The Neo is designed to run as efficiently as possible. When in manual or automatic mode the heater will switch itself off if the room reaches the set temperature, i.e. in smaller rooms that heat up quickly. When this occurs, the flame indicator on your controller will rise and fall every few seconds to indicate the Neo is still operational. The heater will restart once the room temperature falls below the set temperature. **ALWAYS** check your wireless controller before going to bed or leaving the building to ensure the heater has been switched off.

ETR models: About your wireless controller



Child lock

The controller has a built-in child lock function that requires pressing two buttons at the same time. This function cannot be overridden. To turn the controller on, press PWR and OK at the same time. To turn the controller off, press PWR.

Start up

When turning the appliance on the heater will automatically go to the highest setting for approximately 45 seconds, this is to establish the flame pattern. You can adjust the heater during this period, but there will be a 45 second delay.

Over temperature automatic shut off

When operating in any of the three modes the heater will automatically shut down if the room temperature exceeds 40 °C for more than three minutes—this is a safety feature.

ETR models: Wireless controller programming

Setting the clock



The clock must be set before the programmed timers will operate.

1. With the controller off, press T for two seconds.
2. Using the UP and DOWN button, adjust the hours to the correct time. Ensure you have the correct time of day (AM/PM). Press OK.
3. Repeat above step to adjust the minutes and day of the week.

Period programming

Each day of the week can be programmed for four periods, making a total of 28 programmed periods. Week setting available:

MO -> TU -> WE -> THU -> FR -> MO TU WE TH FR -> SA -> SU -> MO TU WE TH FR SA SU

A weekday program can be set so the program used is Monday to Friday. Similarly, a weekend program can be set for Saturday to Sunday.

Factory default settings (Mon-Sun)

If you do nothing to change the programming the default settings (shown below) would be available if you set it to automatic mode. When in this setting, the heater will automatically turn itself off depending on the temperatures set (similar to an air conditioning unit).

For example:

If the room temperature at 1am falls below 15 °C, the heater will turn on and stay on until the room increases above 15 °C.

Time period	Start time	Temperature
Period 1	6:00 am	20 °C
Period 2	8:30 am	15 °C
Period 3	5:00 pm	21 °C
Period 4	10:30 pm	15 °C

ETR models: Wireless controller programming

Period programming continued

If you would like to stop the heater from coming on at all, for example, during the night and before period 1, you can reduce the temperature setting using the DOWN button until -- °C is reached. This means no set temperature has been programmed, and your heater will stay off until the next period setting.

For example:

Time period	Start time	Temperature
Period 1	5:30 am	20 °C
Period 2	8:00 am	15 °C
Period 3	5:30 pm	21 °C
Period 4	11:30 pm	-- °C

To revert back to the default settings, press the following sequence of buttons P > T > T > DOWN.

To begin programming

With the controller off, press and hold the P button for two seconds to initiate programming. The LCD will display 'PROG', 'Pd' and the time at which the controller is currently set will flash. Period 1 can now be set.



Setting the day of the week

1. Press and release the UP or DOWN buttons to change the day of the week.
Scrolling order is as follows:

MO -> TU -> WE -> THU -> FR -> MO TU WE TH FR -> SA -> SU -> MO TU WE TH FR SA SU

2. To accept the selected day(s) of the week, press OK.

Setting the period starting time

After setting the day the AM/PM settings will flash. To set the P1 starting time, press and release the UP or DOWN button for two seconds to adjust. Ensure that the AM/PM is set correctly. To accept press OK. The minute setting will flash, adjust as in step 1 and press OK to accept.

Setting the temperature

After setting the time period the temperature will flash. Press and release the UP or DOWN button for two seconds to adjust. To accept press OK. Period 1 is now set for the day(s) of the week you have chosen. The LCD will display P2 to indicate P2 which can now be set for the same day(s) of the week. Repeat the programming process for the remaining periods.



If you want to check what has been programmed, press P for two seconds and select OK repeatedly to cycle through the settings for each period.

The thermostat display can be set to °C or °F. The default is °C. To change between °C and °F, with the controller off, in quick succession, press P > T > T > A/M.

ETR models: Wireless controller operation

Synchronisation of the wireless controller

The wireless controller will be factory set so synchronising will only be necessary if there is an error or if the controller has been purchased separately. Synchronising involves the wireless controller sending a signal to the fire so that it can memorise the certified frequency that it operates on.

If the controller is not synchronised

Only perform this procedure if the wireless controller is not synchronised (i.e. heater, when on, will not operate when any of the functions are selected on the controller).

1. Turn the power supply OFF at the wall switch for 30 seconds.
2. Turn the power supply ON at the wall switch, the LED will flash once.
3. Within 30 seconds and with the controller off, in quick succession, press the following sequence of buttons P > T > T > UP. The controller will display 'L/C' (Learn Code) for two seconds (then return to the normal OFF state) and the LED will flash once. During this time a special code will be transmitted by the controller to the Neo.

How to use

To get the maximum benefit of the ETR operation, Rinnai recommend that after turning on the unit for the first time that the controller is used to operate the appliance, this includes using the controller to turn the heater on and off.

Using the Neo for the first time

1. Turn on the power supply at the wall.
2. Press the ON/OFF button on the control panel once. The blue LED power indicator will stay on, indicating the heater is in operation.
3. You can now use your wireless controller to operate the heater.

Turning the heater on and off with the wireless controller

Press the PWR and OK button at the same time to ignite the heater. This is a safety feature to reduce the chance of young children being able to turn on the unit. Your temperature control range is 7¹-32 °C.

There is also a setting before 7 °C that is -- °C. This means no set temperature has been programmed.

¹ This does not indicate cooling functionality. The lower temperature range is for colder climates where room temperatures could fall below 7 °C.

ETR models: Wireless controller operation

Modes of operation

Manual mode

- Temperature can be set at any level.
- Time and day of week does not need to be set.

With the controller turned on, press and release the A/M button until the word ‘Manual’ appears on the LCD. Press and hold the UP and DOWN button to increase/decrease the temperature by 1 °C.

Automatic mode

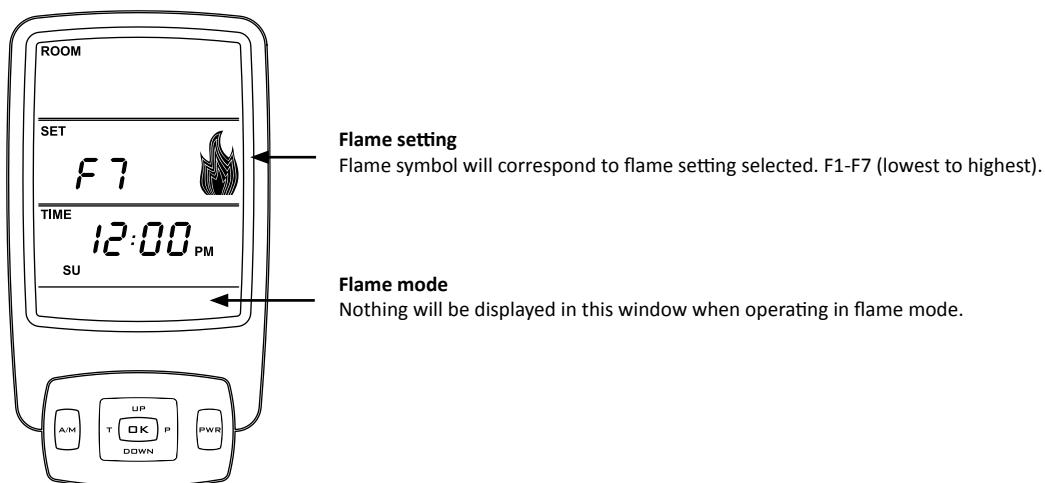
- Temperature is regulated to a programmed level and time.
- Time and day of the week needs to be set.
- At any time the temperature may be adjusted up or down.

Flame control mode

Allows you to set your preferred flame setting and override the set temperature—your heater will not automatically turn itself off (unless the room exceeds 40 °C).

To activate the flame mode (as shown below):

1. Turn the controller on (PWR and OK).
2. Press the A/M button until the ‘Manual’ or ‘Auto’ symbol disappears.
3. Use the UP and DOWN button to adjust the flame setting. When using for the first time, the controller will default to F1 (lowest setting), and then it will default to the last selected flame setting when used again.



Change between manual, automatic, and flame mode

Press and release the A/M button.

Gas and or electricity failure during operation

Interruption to the electricity or gas supply will turn your heater off. Restart will be required. This is a safety feature to ensure unattended starts do not occur.

After interruption to the electricity supply.

To restart your heater after the electricity has been restored follow the steps for ‘Turning the heater on’ (p. 11).

After interruption to the gas supply

The instant the gas supply is interrupted the heater will attempt re-ignition for a period of 60 seconds. If the heater has not started after this period the gas control will go to ‘gas lock-out’ but the fan will remain on to cool the appliance.

To restart your heater once the gas has been restored:

1. Ensure there is gas supply to the heater.
2. To reset the gas control turn OFF the heater by pressing the ON/OFF button once.
3. In quick succession (within five seconds) press the ON/OFF button three times (turn ON, then OFF, then ON again).

Troubleshooting

Symptom	Cause	Solution
Burner will not light	No power present No gas present Power cut Air in gas pipe Ignition failure	Ensure power cord is plugged in and turned on. Ensure gas supply is turned on. Re-ignite after power is restored. Purge air—installer to do. Repeat ignition steps.
Smell of gas	Leaking gas	Turn off gas at meter or LPG cylinder and call installer.
Small soot deposit on logs	Normal operation	No action required.
Severe soot deposits forming on logs or glass	Inadequate flue system, incorrect gas pressure or log misalignment	Contact a Rinnai Service Centre.
Condensation on glass	Normal operation	Allow heater to warm up and condensation will disappear.
Streaky lines on glass	Normal operation	Clean glass.
Blue LED light is on but the heater isn't going	Indicates fault mode	Press the ON/OFF button once (the blue LED will flash), press again and the blue LED will stay on and the heater will attempt to re-ignite.
ETR Models		
Fire comes on at the wrong time	Program not set correctly	Check program periods and AM/PM is correctly set on controller.
Controller display blank	Flat batteries	Check batteries are in place correctly or replace with new batteries.
Heater keeps turning itself off	Set room temperature has been reached	Normal operation, heater has turned off as the room has reached the set temperature. If you wish to override this and have the heater continually on, revert to flame mode, or increase set temperatures (maximum 32 °C).
Blue LED light is on but the heater isn't going and the controller doesn't work	Indicates fault mode	Press the ON/OFF button on the control panel once (the blue LED will flash), press again and the blue LED will stay on and the heater will attempt to re-ignite. Your controller should now work.

During installation there will be an initial burning in period where some smoke and smell may be experienced. This is a normal part of the operation.

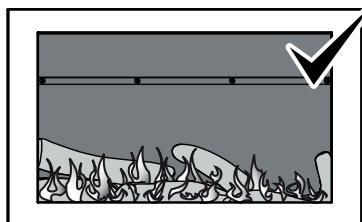
The appliance is fitted with an overheat safety switch. Under overheating conditions this switch will shut off the appliance. If the appliance shuts off repeatedly servicing may be required.

Abnormal flame pattern

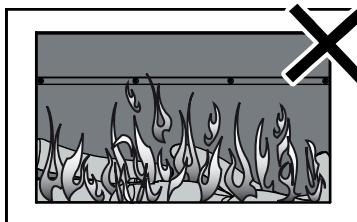
Each Rinnai Flame Fire has a distinct flame pattern. This should look the same every time you start your fire, after an initial warm up period of approximately 20 minutes.

Abnormal flame performance and/or pattern can indicate a problem with the fire, such as blocked gas injectors, log movement during installation or incorrect flue installation. There are some warning signs that could indicate a problem.

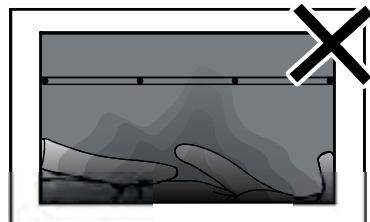
- Unusual smell from the appliance
- Continued difficulty or delay in establishing a flame
- Flame appears either very short or very long
- Flame only burns part way across the burner
- Severe soot building up on the inside of the glass door



Normal flame pattern



Abnormal flame pattern



Soot build up

If any of the above signs occur, please call Rinnai to discuss.

Commissioning

The installer must complete their installation details (p. 22) and commissioning checklist below, and make sure this manual is left with you. They must also explain about the use and care of the Neo and make sure you understand the safety instructions and operation of the appliance.

 WARNING The glass dress guard fitted to this appliance reduces the risk of fire and injury and no part of it should be permanently removed.

Checklist to be completed by a licensed gas fitter

1. Appliance positioned in a suitable location (clearances, combustible clearances, mantels and surrounds etc.).
2. Rinnai flue system installed and tested to ensure effective draw.
3. Gas pressure checked and set.
4. Burn media installed as per instructions.
5. Glass dress guard fitted and customer advised not to remove.
6. Appliance tested for correct operation and to ensure no gas leaks.
7. Customer instructed on operating procedure and safety requirements.
8. Customer advised to service the heater every two years.

Installer details

Company name: _____

Installer name: _____

Address: _____

Phone: _____ Mobile: _____

Certificate of Compliance number for installation: _____

Signed: _____ Date: _____

Rinnai

EXPERIENCE OUR INNOVATION

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All Rinnai appliances meet or exceed the safety standards required by New Zealand gas and electrical regulations.

Rinnai is constantly improving its products and as such information and specifications are subject to change or variation without notice.